REMARKS

The present amendment is responsive to the Office Action mailed in the above-referenced case on October 30, 2002. Claims 2-22, 24-34, 36-38 and 51-143 are presented below for examination. Claims 2-22 ,27-34, 51-71 and 74-104, 106-113 and 115-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo, et al. (U.S. Patent Number 5,764,624), herein after Endo, in view of Moy, et al. (U.S. Patent Number 6,031,817), hereinafter Moy. Claims 24-25, 36-37 and 72 are rejected as being unpatentable over Endo, in view of Moy, and further in view of Ferstenberg, et al. (U.S. Patent Number 5,873,071), hereinafter Ferstenberg. Claims 26, 38, 73, 105 and 114 are rejected as being unpatentable over Endo, in view of Moy, and further in view of Gerszberg, et al. (U.S. Patent Number 6,229,810B1), hereinafter Gerszberg.

Applicant has carefully studied the prior art references cited and applied by the Examiner, and the Examiner's rejections and statements. In response to the Examiner's rejection of the claims, applicant herein provides argument that not all of the limitations of applicant's base claims, as amended, are anticipated or suggested in the prior art cited or applied by the Examiner. Applicant points out and argues the key limitations in applicant's claims, as amended, clearly and unarguably distinguishing applicant's claims over the prior art. Claims 51-143 are herein canceled in order to avoid redundancy.

Regarding claims 2, 4, 6-7, 9-12, 14, 27, and 30-33, the Examiner states that Endo discloses an ATM switching system and path changing method, comprising substantially the limitations of applicant's claim 2, adding that Endo, however, does not disclose embedding the data in virtual packets addressed for the alternate route.

The Examiner states that Moy discloses embedding the data in virtual packets addressed for the alternate route (figure 5, lines 21-49). Therefore, the

Examiner continues, it would have been obvious for one skilled in the art to use the communication link/virtual circuit table as taught by Moy in the system of Endo with the motivation being to re-establish the virtual circuits (col. 10, lines 38-49).

Applicant respectfully traverses the Examiner's interpretation of Moy. The referenced portions of Moy relied upon by the Examiner fails to teach or suggest utilizing a "virtual packet" for forwarding data packets through an alternate route or bypass virtual circuit as disclosed and claimed in applicant's invention.

Applicant points out that that column 10, lines 21-49 of Moy describes Fig. 5 which depicts the communication link/virtual circuit table which has listings associated with each communication link in the network. Specifically, Moy teaches when the switching mode 11n determines that a communication link is malfunctioning, it can determine whether table 48 contains an entry 60p whose communication link identifier field 61 identifies the malfunctioning link 13(p), whether the switch node 11n is associated with any virtual circuits, and if so, update it's various data structures to reflect the fact that those virtual circuits were dropped.

Applicant argues, as clearly shown above, that Moy has absolutely no disclosure of forwarding data over the alternate output route toward the destination node, by embedding the data in virtual packets addressed for the alternate route.

In the "Background" section of applicant's specification the portion of Moy, relied upon by the Examiner, is clearly disclosed. Applicant's specification teaches that each switching node in the network is provided with a database that stores network topology information, which describes the entire topology of the network, and a routing table that provides, among other information, routing information identifying the path to be taken from the switching node to any other switching node in the network. When a switching node receives a packet that is to be transferred to a particular destination device,

it (that is, the switching node) will use the routing table to identify a communication link over which the packet is to be transmitted.

In another "connection-oriented" packet transfer methodology, packets are transferred through the network's switching nodes over constructs which are generally termed "virtual circuits," "virtual connections," "switched paths," and the like (generally, "virtual circuits"). When a source device wishes to transfer information to a destination device, initially a preliminary operation will be performed to establish a virtual circuit over communication links defining a path from the source device, through one or more switching nodes to the destination device. In this methodology, each switching node that operates using the virtual circuit methodology includes a virtual circuit table that identifies, for each virtual circuit for which the switching node forms a path, the particular communication link over which the packet is to be transmitted. In addition, each switching node may also include a network topology database that stores network topology information, which may be used for transferring connectionless packets which may be used for a variety of purposes, including, for example, transferring network management information to respective switching nodes.

Applicant's disclosure points out that several problems can arise if a communication link interconnecting two switching nodes fails or otherwise malfunctions. When that occurs, typically some **time** is required to provide information to all of the switching nodes in the network indicating that the communication link is no longer available. For some time after the failure or malfunction occurs, the network topology information as maintained by the various switching nodes will be inconsistent, in which case their routing determinations, or virtual circuit path establishment decisions will also be inconsistent (as disclosed in Moy).

For example, in a connectionless network, inconsistent or incorrect routing information can result in looping packets among a plurality of switching nodes in the network, loss of packets, as well as routing of packets over paths in

the network which are not optimal. In a connection oriented network, inconsistent or incorrect routing information can result in inability to set up new virtual circuits and inability to repair virtual circuits which have failed.

Applicant points out that Moy teaches precisely the problem applicant's invention alleviates. There is a patentable advantage of using the "virtual packets" to forward the original data packets. Moy only discloses updating communication link/virtual circuit tables in response to receiving an advertising message packet broadcast of a circuit failure.

Applicant argues that the above method as disclosed by Moy is substantially different than embedding received input data packets in virtual data packets for forwarding over an alternate virtual route, in the event of a malfunction or failure of the communication link over which the data would normally be routed. Applicant knows of no other system in the current art that accomplishes such re-routing of data utilizing the new and novel method has described above, and distinctly claimed in applicant's independent claims as amended, of embedding data to be transferred into, and extracting data to be transferred from, virtual data packets.

Applicant believes that all of the independent claims of applicant's invention, as amended and argued above by applicant are now clearly and unarguably patentable over the prior art presented by the Examiner, either singly or combined, as neither of the references presented by the Examiner disclose, suggest or intimate embedding data to be transferred into virtual packets, and extracting the data from the virtual packets for forwarding to the destination node, as is recited in applicant's independent claims as amended. Depending claims 3-26, 28-34, and 36-38 are then patentable on their own merits, or at least as depended from a patentable claim.

As all of the claims standing for examination as amended and argued above by applicant have been shown to be patentable over the art of record, applicant respectfully requests reconsideration and that the present case be passed quickly to issue. If any fees are due beyond fees paid with this

amendment, authorization is made to deduct those fees from deposit account 50-0534. If any time extension is needed beyond any extension requested with this amendment, such extension is hereby requested.

Version With Markings to Show Changes Made

In the claims:

30. (Amended) The apparatus of claim 27 wherein data are forwarded over the alternate output route toward the destination node before other nodes on the network receive information that data cannot be transferred between the at least one [Of] of the nodes and the next successive node.

Cancel claims 51-143.

Respectfully Submitted,

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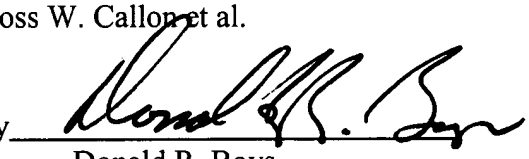
by 

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